

# OPERATION HUSKY: OPERATIONAL ART IN LARGE FORMATION COMBINED ARMS MANEUVER

A Monograph

by

MAJ John C. Lemay  
United States Army



School of Advanced Military Studies  
United States Army Command and General Staff College  
Fort Leavenworth, Kansas

2013-02



MONOGRAPH APPROVAL PAGE

Name of Candidate: Major John C. Lemay

Monograph Title: Operation Husky: Operational Art in Large Formation Combined Arms Maneuver

Approved by:

\_\_\_\_\_, Monograph Director  
Peter J. Schifferle, Ph.D.

\_\_\_\_\_, Seminar Leader  
Juan K. Ulloa, COL

\_\_\_\_\_, Director, School of Advanced Military Studies  
Henry A. Arnold III, COL

Accepted this 10th day of December 2013 by:

\_\_\_\_\_, Director, Graduate Degree Programs  
Robert F. Baumann, Ph.D.

The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the US Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

## ABSTRACT

OPERATION HUSKY: OPERATIONAL ART IN LARGE SCALE COMBINED ARMS MANEUVER, by MAJ John C. Lemay, 47 pages.

Operation Husky, the Allied World War II invasion of Sicily, featured the clash of an Allied Army Group against an Axis Army. The Allied 15th Army Group was composed of fourteen divisions – an impressive total when one considers that combined, the United States and British Armies only have twelve active duty divisions today. Further, the Axis were a formidable opponent who skillfully employed combined arms maneuver, aggressively attacked the 15th Army Group, and contested Allied air superiority. In light of the United States Army's decade long focus on wide area security, this monograph examines Operation Husky through the lens of the elements of operational art to draw out lessons for modern planners who are changing their focus to large formation combined arms maneuver.

The Allies skillfully incorporated lines of operation, decisive points, operational reach, basing, culmination, and risk. However, they poorly employed the elements of center of gravity, tempo, and phasing, which arguably allowed much of the Axis Army to retrograde to Italy in good order. The reason for this poor employment was poor planning.

Therefore this monograph recommends that large scale combined arms maneuver operations be completely planned prior to execution, that there is a deliberate plan to plan, that the planning is fully resourced, and finally, that planners integrate all domains, land, sea, air, space, and cyber, in their application of operational art. Operation Husky is a rich depository of vicarious experience in large scale combined arms maneuver for today's field grad officers.

## ACKNOWLEDGEMENTS

Many organizations and individuals made contributions to this monograph. I would like to thank Dr. Gregory Hospodor for his assistance in researching Operation Husky and his discussions of operational art, Mrs. Beth MacKenzie, Chief, Historical Products Branch, U.S. Army Center of Military History, for providing an editable pdf map of Sicily, Mr. Alex Henriquez, Imagery Analyst, The U.S. Army Geospatial Center for providing a hard drive with Sicily map data, Terry Yetzbacher, Geospatial Information Technician, Lewis and Clark Center, for providing hard copy Joint Operations Graphic maps of Sicily, Mrs. Mary Manning, Reference Librarian at the First Division Museum at Cantigny, for her research assistance, Kevin Bailey, Archivist, Dwight D. Eisenhower Presidential Library, for his research assistance, Mrs. Jacqueline Kania for editing my monograph, Majors Ben Bennett and Stephen Magner, members of my monograph syndicate, for their numerous reviews of my monograph, and finally, my monograph director, Dr. Peter J. Schifferle.

## TABLE OF CONTENTS

ILLUSTRATIONS .....	vi
ACRONYMS .....	vii
INTRODUCTION .....	1
Organization of the Monograph.....	2
Operational Art and its Elements .....	4
SICILY IN JULY 1943 .....	9
The Desired Endstate .....	10
The Operational Environment.....	11
THE PLAN FOR OPERATION HUSKY .....	19
The Allied Concept.....	19
Critique Using the Elements of Operational Art.....	23
THE EXECUTION OF OPERATION HUSKY .....	30
Lessons for Today's Officers.....	40
CONCLUSION .....	42
Recommendations.....	43
BIBLIOGRAPHY .....	45

## ILLUSTRATIONS

	Page
Figure 1: Sicily .....	18

## ACRONYMS

ADP	Army Doctrine Publication
ADRP	Army Doctrine Reference Publication
CARL	Combined Arms Research Library
CGSC	U.S. Army Command and General Staff College
D.U.K.W	A 2.5 ton amphibious landing craft. D = built in 1942, U = amphibious 2.5 ton truck, K =front wheel drive, W = rear wheel drive
FM	Field Manual
PMESII-PT	Political, Military, Economic, Social, Infrastructure, Information, Physical Environment, and Time.
SAMS	School of Advanced Military Studies
MMAS	Master of Military Art and Science
US	United States



## INTRODUCTION

A rather startling incident occurred one afternoon that gave all of us in the command post [II Corps] a little chill. A German plane came flying very low across the lines and right in the middle of our CP dropped a package which contained an emblem which had obviously been cut from the fabric of one of our Cub artillery observation planes.

—Edmund F. Ball, *Staff Officer: With the Fifth Army: Sicily, Salerno and Anzio*

On 10 July 1943 the 1st Infantry Division landed on the island of Sicily near Gela, but by 5 August the 1st Infantry Division had culminated near Troina, a small mountaintop town in northeastern Sicily. During those 27 days each of the division's infantry companies lost over 140 Soldiers and most of their non commissioned officers. A number of the division's battalions were only receiving supply by airdrop. Small arms and artillery of the German 15th Panzer Grenadier Division continued to inflict casualties on the exhausted 1st Infantry Division. 5 August 1943 ended with the relief of the division commander, Major General Terry Allen, and the assistant division commander, Brigadier General Teddy Roosevelt, for combat exhaustion.<sup>1</sup> Combat of this intensity and scale is outside the experience of today's United States Army officers, who are skilled in wide area security. They are also experienced and skilled at small scale combined arms maneuver. However, it is difficult for today's Army officers to imagine large scale combined arms maneuver against a peer competitor who could inflict 70 percent casualties on a US division.

The purpose of this monograph is to prepare today's United States Army officers for large scale combined arms maneuver. To understand large scale combined arms maneuver it

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<sup>1</sup>James Scott Wheeler, *The Big Red One: America's Legendary 1st Infantry Division from World War I to Desert Storm* (Lawrence, KS: University Press of Kansas, 2007), 253, 256-257; Omar N. Bradley, *A Soldier's Story* (New York: Henry Holt and Company, 1951), 155. General Bradley wrote "Allen had become too much of an individualist to submerge himself without friction in the group undertakings of war. The 1<sup>st</sup> Division, under Allen's command, had become too full of self-pity and pride....Any successor of Allen's would find himself in an untenable spot unless I allowed him to pick his own assistant commander. Roosevelt had to go with Allen for he, too, had sinned by loving the division too much."

evaluates Operation Husky, the World War II invasion of Sicily, using today's United States Army definition of operational art and the elements of operational art. This is not an effort to judge the World War II commanders and staff with the benefit of hindsight, but rather to draw lessons from historical experience that an Army officer today could apply in a future war characterized by large formation combined arms maneuver. With this perspective, the lessons from Operation Husky are that the Allies did not focus on the Axis center of gravity, maintain an aggressive tempo, or use phasing. However, the reason for these failures on the part of the Allies was their flawed planning. Therefore the recommendation for today's army officers is that large scale combined arms maneuver must be planned in detail, that the detailed planning must be planned and resourced, and that planners should integrate all domains, land, sea, air, space, and cyber, in their application of operational art.

#### Organization of the Monograph

First, the introduction defines operational art and its ten elements. In fairness to our World War II predecessors it will also consider how today's terms were, or were not, reflected in the 1941 edition of Field Manual 100-5, *Operations*, or the 1942 edition of Field Manual 100-15, *Larger Units*. But ultimately, the fact that in 1943 the United States Army did not use today's doctrinal concepts is not relevant—because the purpose of this monograph is to enhance understanding of today's doctrine through historical illustration. Then, the first section examines the operational environment of Sicily in July 1943.

The first section examines the operational environment to provide the necessary background for the reader to proceed and judge the Allies use of operational art. The section is organized into two parts, the desired endstate, and the operational environment. The desired endstate briefly describes what the Allies' strategic objectives were. Then the operational environment uses four of today's operational variables, military, social, infrastructure, and

physical environment, to describe Sicily in July 1943.<sup>2</sup> The section concludes with Map 1: Sicily, which depicts Sicily in July 1943, using today's graphical standards.

The second section is organized into two parts. The first part explains the Allied plan for Operation Husky, described in four phases—preparation, approach, landing, and the conquest of Sicily. The second part critiques it using seven of today's elements of operational art, specifically, center of gravity, decisive points, lines of operation, operational reach, culmination, basing, and risk.

The third section is also divided into two parts. The first part summarizes Operation Husky's 38-day campaign. As the summary proceeds, critique, according to various elements of operational art, is interwoven. The section begins with a discussion of risk and operational reach with respect to the Allied reduction of the islands of Pantelleria and Lampedusa. Then phasing and tempo are considered in a discussion of the Allied airborne insertions. Next, the elements of basing, decisive points, and lines of operation are highlighted during the Allied landings. After the landings, tempo and center of gravity are examined through the lens of the Allied breakout from the beaches. Then basing, operational reach, and culmination are discussed with respect to Seventh Army's seizure of Palermo. Then second section considers two overarching lessons for today's officers from Operation Husky.

Finally, the monograph ends with a conclusion that contains three recommendations. The first recommendation is that large scale combined arms maneuver must be planned in detail. The second recommendation is that the detailed planning must be planned and resourced. The final recommendation is that planners should apply operational art across all five domains to achieve cross-domain synergy.

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<sup>2</sup>Department of the Army, Army Doctrine Publication (ADP) 3-0, *Unified Land Operations* (Washington, DC: Government Printing Office, 2011), 2. The operational variables are abbreviated PMESII-PT. This stands for: Political, Military, Economic, Social, Infrastructure, Information, Physical Environment, and Time.

### Operational Art and its Elements

The 2011 edition of Army Doctrine Publication (ADP) 3-0, *Unified Land Operations*, defines operational art as “the pursuit of strategic objectives, in whole or in part, through the arrangement of tactical actions in time, space, and purpose.”<sup>3</sup> In contrast, United States Army World War II doctrine made only a single reference to accomplishing strategy. Rather, the 1941 edition of FM 100-5, *Operations*, stated, “[the] ultimate objective of all military operations is the destruction of the enemy’s armed forces in battle.”<sup>4</sup> Despite this, the 1941 edition of FM 100-5, *Operations*, and the 1942 edition of FM 100-15, *Larger Units*, contain many concepts that are similar to today’s elements of operational art. The elements of operational art, as defined by the 2011 edition of ADP 3-0, are end state and conditions, center of gravity, decisive points, lines of operations and lines of effort, operational reach, basing, tempo, phasing and transitions, culmination, and risk.<sup>5</sup> Consideration of these elements aid officers in designing operational approaches for combined arms maneuver. To increase understanding of these elements Section Two uses them to critique the plan for Operation Husky and Section Three employs them to critique the execution of Operation Husky.

Endstate and conditions are the first element of operational art. Currently endstate and conditions are defined as those circumstances the commander wants to exist when an operation ends.<sup>6</sup> There is no corresponding concept in World War II doctrine<sup>7</sup>, except, as noted above, the

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<sup>3</sup>Ibid, 9.

<sup>4</sup>1923 Field Service Regulations as cited in Peter J. Schifferle, *America’s School for War* (Lawrence, KS: University Press of Kansas, 2010), 49. Dr. Schifferle writes that the 1939 Field Service Regulations and the 1941 and 1944 editions of FM 100-5 contain identical language.

<sup>5</sup>Department of the Army, Army Doctrine Reference Publication (ADRP) 3-0, *Unified Land Operations* (Washington, DC: Government Printing Office, 2012), 3-0, 4-3.

<sup>6</sup>Ibid.

end state of destroying the enemy's armed forces. In contrast, the concept of center of gravity pervades World War II doctrine.

Center of gravity is the second element of operational art. Currently, ADRP 3-0 defines it as “the source of power that provides moral or physical strength, freedom of action, or will to act.” ADRP 3-0 goes on to explain that this is a modern expression of Clausewitz's classic definition and that centers of gravity can be either physical or moral. The enemy's military force is an example of a physical center of gravity.<sup>8</sup> While Clausewitz used the term throughout *On War*, his use of it in Chapter 28 clarifies that at the theater level, he considers centers of gravity to be military forces. Clausewitz wrote “A major battle in a theater of operations is a collision between two centers of gravity; the more forces we can concentrate in our center of gravity, the more certain and massive the effect will be. Consequently, any partial use of force not directed toward an objective that either cannot be attained by the victory itself or that does not bring about the victory should be condemned.”<sup>9</sup> After considering multiple translations of Clausewitz, Dr. Joe Strange and Colonel Richard Iron conclude, “There is no doubt that Clausewitz meant a center of gravity to be the main strength of the enemy.”<sup>10</sup> From this perspective, not only does World War II doctrine address center of gravity, but also it is truer to Clausewitz's writings than today's doctrine. World War II doctrine uses the term “the objective” synonymously with center of gravity. *FM 100-5*, 1941, Chapter 9, The Offensive, begins with a discussion of the objective. It

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<sup>7</sup>In this monograph, “World War II doctrine” or “concept” refers to the 1941 edition of *FM 100-5, Operations*, and the 1942 edition of *FM 100-15, Larger Units*. No other World War II era doctrinal publication was reviewed.

<sup>8</sup>*Ibid.*, 4-3 to 4-4.

<sup>9</sup>Carl von Clausewitz, *On War*, ed. and trans. by Michael Howard and Peter Paret (Princeton: Princeton University Press, 1976), 489.

<sup>10</sup>Joe Strange and Richard Iron, *Understanding Centers of Gravity and Critical Vulnerabilities: Part I: What Clausewitz (Really) Meant by Center of Gravity* (Department of War Studies, Swedish National Defence College, 2005), 8.

states that the purpose of offensive action is to destroy the enemy and commanders must pick a physical objective, such as an enemy formation or key terrain that will produce a convergence of friendly effort and assure the enemy's destruction. Further, "the objective having been selected, all components are direct in coordinated effort towards its attainment. Actions which do not contribute to this purpose are avoided."<sup>11</sup> This sounds very similar to the previous Clausewitz quotation. FM 100-15, 1942, reinforces the importance of center of gravity in Chapter 2, Planning a Campaign, Section III, The Objective.<sup>12</sup> While the concept of center of gravity is present in both today's and World War II's doctrine, the concept of lines of effort is not.

Lines of Operations and Lines of Effort are the third element of operational art. A line of operations defines the directional orientation of the force, linking its base of operations to its objective. Typically a line of operations connects a series of decisive points. A line of effort uses logic of purpose rather than geographic reference to link objectives.<sup>13</sup> There is no equivalent to line of effort in World War II doctrine; however, the World War II term "lines of action" are used synonymously with today's lines of operation.<sup>14</sup> Like lines of operation, decisive point is another of today's elements that is conceptually found in World War II doctrine.

Decisive point is the fourth element of operational art. ADRP 3-0 defines a decisive point as "a geographic place, specific key event, critical factor, or function that, when acted upon, allows a commander to gain a marked advantage over an adversary or contribute materially to achieving success." While the term decisive point is not in World War II doctrine, the concept

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<sup>11</sup>United States, War Department, Field Service Regulations, FM 100-5, *Operations*, 22 May 1941, (Washington, DC: Government Printing Office, 1941). Reprint edition (Fort Leavenworth, KS: U.S. Army Command and General Staff College Press, 1992), 97.

<sup>12</sup>United States, War Department, Field Service Regulations, FM 100-15, *Larger Units*, 29 June 29, 1942 (Washington, DC: Government Printing Office, 1942), 12.

<sup>13</sup>ADRP 3-0, 4-5.

<sup>14</sup>FM 100-5, 1941, 25; FM 100-15, 1942, 10.

certainly is. Compare the following two passages from ADRP 3-0, 2012, and FM 100-5, 1941.

“Decisive points help commanders set clear, conclusive, attainable objectives that directly contribute to achieving the endstate” versus “Concentration of superior forces, both on the ground and in the air, at the decisive place and time and their employment in a decisive direction, creates the conditions essential to victory.”<sup>15</sup> Unlike decisive points, operational reach has no corresponding World War II concept.

Operational reach is the fifth element of operational art. ADRP 3-0 defines operational reach as “the distance and duration across which a joint force can successfully employ military capabilities.” Further, it informs us that the limit of operational reach is the culminating point and a sustainable tempo extends operational reach.<sup>16</sup> FM 100-15, 1942 stresses that the plan of campaign must have “supply arrangements and routes of communication” while FM 100-5, 1941 discusses the extended scope of operation and radius of action of the cavalry and armored divisions versus the infantry division.<sup>17</sup> So although these issues are not combined into one concept, supply arrangements and radius of action are components of operational reach. Unlike operational reach, World War II doctrine does contain the concept of tempo, although not the term.

Tempo is the sixth element of operational art. According to ADRP 3-0, tempo is “the relative speed and rhythm of military operations over time with respect to the enemy.” It grants the initiative through simultaneous and sequential operations that overwhelm the enemy’s ability to counter friendly action, quickly gain positions of advantage and avoid unnecessary engagements.<sup>18</sup> Similarly, FM 100-5, 1941 states, “Through offensive action a commander

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<sup>15</sup>ADRP 3-0, 4-4; FM 100-5, 1941, 23.

<sup>16</sup>ADRP 3-0, 4-5.

<sup>17</sup>FM 100-15, 1942, 11; FM 100-5, 1941, 255.

<sup>18</sup>ADRP 3-0, 4-7.

exercises his initiative, preserves his freedom of action, and imposes his will on the enemy.” Further, “The attack is rapid, deep, and sustained until the decision is won.” It also discusses maintaining “relentless pressure” on the enemy and the use of reserves and the timely displacement of artillery to “maintain the continuity and direction of attack.”<sup>19</sup> So FM 100-5, 1942 discusses tempo, but just does not use the term. Unlike tempo, World War II doctrine has almost no discussion of phasing or transitions.

Phasing and transitions is the seventh element of operational art. Today “A phase is a planning and execution tool used to divide an operation in duration or activity.” Phases can be used to focus effort and concentrate combat power at a decisive point in time and space. Transitions occur between phases or branches and sequels and “require planning and preparation well before their execution to maintain the momentum and tempo of operations.”<sup>20</sup> FM 100-5, 1941 discussed phases for employment of artillery against fortified positions and changing between the offense and defense but generally did not contain the concept of phasing or transitions.<sup>21</sup> Similarly, FM 100-5, 1941 only discussed bases in terms of air power.

Basing is the eighth element of operational art. ADRP 3-0 discusses how bases provide support and services for sustained operations and categorizes different types of bases. A lodgment “is a designated area in a hostile or potentially hostile operational area that, when seized and held, makes the continuous landing of troops and material possible and provides maneuver space for subsequent operations.” Lodgments should be established near air, land, and sea transportation hubs.<sup>22</sup> FM 100-5, 1941 addresses bases in the context of air power, stating, “Air bases, suitably located, are essential for the operations of heavier-than-air aviation.” It also stresses that superior

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<sup>19</sup>FM 100-5, 1941, 22, 271, 125, 131.

<sup>20</sup>ADRP 3-0, 4-7 to 4-8.

<sup>21</sup>FM 100-5, 1941, 120, 158.

<sup>22</sup>ADRP 3-0, 4-6 to 4-7.



bases contribute to air superiority.<sup>23</sup> Unlike basing, the term culmination is not in World War II doctrine.

Culmination is the ninth element of operational art. The term culmination is not used in World War II doctrine, but the concept resides in it. ADRP 3-0 states “the culminating point is that point in time and space at which a force no longer possesses the capability to continue its current form of operations.”<sup>24</sup> This idea is discussed in the chapters “Termination of the Defense” and “Termination of Offensive Action” in FM 100-5, 1941.<sup>25</sup> Unlike culmination, risk is explicitly discussed in World War II doctrine.

Risk, the final element of operational art, has the same terminology and conceptual meaning in both World War II and today’s doctrine. ADRP 3-0 states that “Risk, uncertainty, and chance are inherent in all military operations” and commanders accept risk to achieve decisive results while ensuring that inadequate planning and preparation do not recklessly incur risk. FM 100-5, 1941 states that “commanders must take calculated risks” and admonishes them not to delay because of a lack of information since such hesitation may result in lost opportunities.<sup>26</sup> In addition to understanding the ten elements of operational art, it is important to understand the operational environment of Sicily in July 1943, before critiquing Operation Husky.

#### SICILY IN JULY 1943

The Island of SICILY forms a natural bridge between the tip of TUNISIA and the ITALIAN mainland. Shaped like a jagged arrowhead with broken point toward the West, it is 140 miles long and 110 miles wide across the barbs at the Eastern end. The Western point, CAPO BOEO, or LILIBEO, is only 90 miles Northeast of CAP BON in TUNISIA; the Southeastern barb, CAPO PALEORA points directly South to MALTA only 55 miles away; the Northeastern barb, CAPO PELORA is separated from the

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<sup>23</sup>FM 100-5, 1941, 14, 250.

<sup>24</sup>ADRP 3-0, 4-8.

<sup>25</sup>FM 100-5, 1941, 158.

<sup>26</sup>ADRP 3-0, 4-9; FM 100-5, 1941, 26.

CALABRIAN Peninsula at the toe of ITALY only by the STRAITS of MESSINA, which narrows to a width of barely two miles.

—Dwight Eisenhower, *Commander in Chief's Dispatch, Sicilian Campaign, 1943*

Before critiquing a military campaign it is important to understand the operational environment that existed at the start of the campaign, and the new operational environment, or endstate, the campaign was designed to achieve. Then operational art, the linking of tactical actions in time, space, and purpose, to achieve strategic objectives, can be assessed in context. So first consider the Allies' desired endstate for Operation Husky. Then, with this endstate in mind, consider the operational environment of Sicily in July 1943. The description of the operational environment is organized using four of the United States Army's current operational variables. Specifically, they are the military, social, infrastructure, and physical environment variables.<sup>27</sup> This section provides the context for the second section's discussion of the plan and third section's review of the execution of Operation Husky.

### The Desired Endstate

On 19 January 1943, the Combined Chiefs agreed to invade Sicily. The endstate they desired to achieve was to improve lines of communication in the Mediterranean, divert German forces from the Eastern Front, intensify pressure on Italy to weaken the Axis alliance, and to convince Turkey to join the Allies.<sup>28</sup> Additionally, the Combined Chiefs wanted to seize Sicily to secure a base from which to launch further offensive action.<sup>29</sup> With this understanding of the strategic objectives Eisenhower was ordered to achieve, it is time to consider Sicily's operational environment in July 1943.

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<sup>27</sup>ADP 3-0, 2.

<sup>28</sup>Dwight Eisenhower, *Commander in Chief's Dispatch, Sicilian Campaign, 1943* (Allied Force Headquarters, 1943), 2; Albert N. Garland, Howard M. Smyth, and Martin Blumenson, *The Mediterranean Theater of Operations: Sicily and the Surrender of Italy* (Washington, DC: Center of Military History, 2002), 52; Bradley, 105.

<sup>29</sup>Eisenhower, 5.

## The Operational Environment

Today's definition of the operational environment is "a composite of the conditions, circumstances, and influences that affect the employment of capabilities and bear on the decisions of the commander."<sup>30</sup> This is simply a rephrasing of the idea contained in the 1941 publication of Field Manual 100-5, *Operations*, which states, "The commander must quickly evaluate all the available information bearing on his task, *estimate the situation*, and reach a decision."<sup>31</sup> This paper structures 'the available information' bearing on Operation Husky in 1943 according to the military, social, infrastructure, and physical environment operational variables.<sup>32</sup> The military operational variable consists of the air, ground, and sea forces of both the Allies and the Axis.

In 1943, General Dwight Eisenhower was the commander of Allied Force Headquarters, and had overall responsibility for the Mediterranean Theater of Operations including Operation Husky. General Harold Alexander was the Deputy Commander of Allied Force Headquarters, and the commander of the 15th Army Group, which executed Operation Husky. General Alexander was responsible for the detailed planning, preparation, and execution of Operation Husky.<sup>33</sup> The 15th Army Group had two subordinate armies. The first was the US Seventh Army commanded by General Patton, which consisted of four infantry divisions, one armored division, and one airborne division. Next was the British Eighth Army, commanded by General Montgomery, which consisted of six infantry divisions, one armored division, and one airborne division, plus

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<sup>30</sup>ADP 3-0, 2.

<sup>31</sup>FM 100-5, 25.

<sup>32</sup>Ibid., 11. While the operational variables were not formal doctrine in 1943, the same things were considered. FM 100-15 stated "Major terrain features, such as large rivers, lakes, heavily forested areas, and mountain ranges; the character, position, and shape of frontiers; density of population and consequent refugee problem; transportation means; and the number and location of routes of communication may play a decisive role in the employment of large forces. These factors require careful analysis as to their effect on contemplated combat operations and the supply of the forces engaged."

<sup>33</sup>Garland, Smyth, and Blumenson, 55.

two independent brigades.<sup>34</sup> Air Chief Marshal Arthur Tedder was the Allied air commander. The Allies had an advantage in air forces with 3,700 airplanes, over double the number available to the Axis.<sup>35</sup> Admiral Cunningham was the naval commander for Operation Husky. The centerpiece of Allied naval forces in the Mediterranean was the British 1st Battle Squadron comprised of six battleships and two aircraft carriers.<sup>36</sup> This Allied force faced the daunting task of assaulting the island of Sicily, fortified by the Italian Sixth Army.

The Italian Sixth Army, commanded by General Alfredo Guzzoni, led the Axis forces in Sicily.<sup>37</sup> The Axis had approximately 230,000 troops in Sicily composed of 200,000 Italians and 30,000 Germans.<sup>38</sup> These forces were organized into six Italian coastal divisions, four Italian field divisions, and two German divisions.<sup>39</sup> See Map 1 for the disposition of the Axis forces. The Axis coastal defense divisions consisted of some 75,000 men organized into 84 static infantry battalions supported by artillery and machineguns.<sup>40</sup> Despite this force, the Axis did not have continuous coastal defenses. Only the ports were well fortified and protected by anti-ship and anti-air artillery.<sup>41</sup> The German divisions were the most capable Axis military force on Sicily, and were expected to be a mobile reserve to counterattack the Allied landings.<sup>42</sup> The Allies expected the Axis to actively defend the beaches, launch local counterattacks, and maintain contact with

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<sup>34</sup>Eisenhower, 7; Garland, Smyth, and Blumenson, 57.

<sup>35</sup>Eisenhower, 12.

<sup>36</sup>Ibid., 15.

<sup>37</sup>Garland, Smyth, and Blumenson, 77.

<sup>38</sup>Headquarters CT 26, *FO# 6: BIGOT* (Operations Order, A. P. O. #1, U. S. Army, 1943), 17; Garland, Smyth, and Blumenson, 80-81.

<sup>39</sup>Garland, Smyth, and Blumenson, 80-81; Bradley, 114.

<sup>40</sup>Headquarters CT 26, *FO# 6: BIGOT*, (Operations Order, A. P. O. #1, U. S. Army, 1943), 17.

<sup>41</sup>Garland, Smyth, and Blumenson, 79.

<sup>42</sup>Eisenhower, 9.

light forces until the Axis determined the Allies' main effort. Then, by the second day after the Allied landing, the Axis would have the capability to launch a coordinated counterattack with one infantry division. By the third day after the Allied landing, the Axis would be able to launch a corps counter attack of two divisions.<sup>43</sup> This intelligence closely reflected the Axis actual plan, which was to fight the battle at the beach with coastal units, immediately reinforce them with the four Italian mobile divisions, and finish the Allies on the beach with the counterattack of the two German divisions.<sup>44</sup> The Axis air forces based in Sicily, Sardinia, Italy and Southern France had 270 serviceable German fighters, another 270 obsolete Italian fighters, and 250 serviceable German bombers.<sup>45</sup> The Italian Navy was poorly trained, but its six battleships and two 8-inch cruisers were still dangerous. The Italian Navy was located at Taranto and Spezia and could concentrate on either side of Sicily by passage through the Axis controlled Strait of Messina.<sup>46</sup> In addition to the Allied and Axis Forces, it is important to understand the Sicilian population.

It is important to understand civilian populations because they can have a major impact on military operations. Civilians can disrupt lines of communication, aid partisans, and consume military supplies. In 1943 Sicily had a population just under 4 million. The majority of the population lived in coastal towns, particularly along the northern and eastern coasts. About 10 percent of the population lived scattered throughout the countryside. The majority of the population was engaged in agriculture and had a low standard of living because of the difficulties imposed by shortages of water, the prevalence of malaria, and absentee landlords. Men and women were commonly segregated and women had a low social status. Further, around 40

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<sup>43</sup>Headquarters CT 26, *FO# 6: BIGOT*. (Operations Order, A. P. O. #1, U. S. Army, 1943), 17.

<sup>44</sup>Garland, Smyth, and Blumenson, 87.

<sup>45</sup>Headquarters CT 26, *FO# 6: BIGOT*. (Operations Order, A. P. O. #1, U. S. Army, 1943), 4.

<sup>46</sup>Eisenhower, 15.

percent of the population was illiterate.<sup>47</sup> In the case of Operation Husky, the Allies had a detailed plan for the military governance of Sicily, and civilian activities did not significantly impact the Allied invasion.<sup>48</sup>

Along with its civilians, the island of Sicily had significant man made infrastructure. The principal infrastructures of concern on Sicily were the ferries across the Strait of Messina, ports, airfields, and roads. In 1943 Sicily had six train ferries across the Strait of Messina. These ferries used four terminals in Messina and three in Italy. In 24 hours these ferries could move 40,000 men or 7,500 men and 750 vehicles across the strait. Additionally there was a steamer service that could move 12,000 men in 24 hours. Finally, Messina had a shuttle air service that could move 1,000 tons a day.<sup>49</sup> The largest ports on the island were Messina, Palermo, Catania, Syracuse, and Licata.<sup>50</sup> The port of Licata had a capacity of 600 tons a day, Syracuse 1000, Catania 1800, and Palermo 2500.<sup>51</sup> Because the port of Messina was so close to Italy it was not an option for logistical sustainment of Allied forces during Operation Husky. Together the ports of Catania and Palermo could sustain 10 and one-half divisions and their associated air forces. Without these two ports the Allies calculated they could not logistically sustain enough divisions to seize Sicily.<sup>52</sup> Airfields were another critical piece of man-made infrastructure. The Axis has 19 airfields in Sicily in March 1943, all of which were within 15 miles of the coast.<sup>53</sup> However, the Axis

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<sup>47</sup>Headquarters CT 26, *FO#6: BIGOT*. (Operations Order, A. P. O. #1, U. S. Army, 1943), 15.

<sup>48</sup>The military governance of Sicily and Allied civil affairs operations are beyond the scope of this monograph—indeed, they merit their own monograph.

<sup>49</sup>Eisenhower, 5.

<sup>50</sup>*Ibid.*, 6.

<sup>51</sup>*Ibid.*, 14.

<sup>52</sup>*Ibid.*, 6.

<sup>53</sup>*Ibid.*, 5.

increased their 19 airfields in Sicily to 30 by June 1943.<sup>54</sup> The Axis also had airfields in Sardinia that threatened a western approach to Sicily.<sup>55</sup> Further, the Axis had airfields south of Sicily on the islands of Pantelleria and Lampedusa. The last critical piece of infrastructure was Sicily's roads. Sicily had state roads, provincial roads, and communal roads in 1943. The state roads were of excellent construction with a solid foundation surfaced by asphalt. The width of state roads varied from 25 feet on the coast to 15 feet in the mountains. Provincial roads were not asphalted and they varied from 10 to 19 feet in width. Finally, communal roads were unimproved and often too narrow for motor vehicles.<sup>56</sup> On state roads bridges could support 25 to 40 tons while on the other roads they could only support 10 tons.<sup>57</sup> While infrastructure is critical to understanding the operational environment, so is the physical environment.

The island of Sicily is about 10,000 square miles, comparable to the size of the State of Vermont.<sup>58</sup> Its physical environment is characterized by terrain and weather. First, Sicily was strong defensive terrain for the Axis because it had great observation and fields of fire, poor avenues of approach, numerous obstacles, and little cover and concealment.

Observation, fields of fire, and avenues of approach made Sicily strong defensive terrain. The coast is Sicily's major mobility corridor and allowed movement along the perimeter of the island. The coast has numerous bays, separated from each other by prominent capes. Beaches of sand or gravel that vary from 100 yards to miles in length spot the coast.<sup>59</sup> Roads through the

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<sup>54</sup>Ibid., 19; Bradley 115. Bradley writes that the 19 airdromes had increased to 32 by early May.

<sup>55</sup>Ibid., 6.

<sup>56</sup>Headquarters CT 26, *FO#6: BIGOT*. (Operations Order, A. P. O. #1, U. S. Army, 1943), 15.

<sup>57</sup>Ibid.

<sup>58</sup>Garland, Smyth, and Blumenson, 52.

<sup>59</sup>Headquarters CT 26, *FO#6: BIGOT*, (Operations Order, A. P. O. #1, U. S. Army, 1943), 14.

mountains provided additional mobility corridors. Because Sicily is so mountainous, nearly all the roads had constant elevation change and sharp turns. Further, all the roads narrowed in towns and villages. The foothills of Mount Etna north of the Catania plain provided excellent observation.<sup>60</sup> Some terrain features in Sicily were so prominent they are considered key terrain.

Key terrain is any locality whose seizure affords a marked advantage to a combatant.<sup>61</sup> The landing beaches were key terrain because they were critical to Allied sustainment that was delivered by the navy at the beaches. The landing beaches had soft sand and a gentle gradient, were relatively narrow, and were over watched by hilly or mountainous country.<sup>62</sup> Mount Etna was also key terrain because it dominated Messina. In Eisenhower's words, Mount Etna provided a "magnificent bastion in the final defense line protecting the vital MESSINA area."<sup>63</sup> But in addition to these key terrain features, the natural characteristics of obstacles, cover and concealment are important.

Obstacles, cover and concealment aided the defense in Sicily. Nearly all of inland Sicily was covered in mountains or rugged hills. The northern half of the island was particularly dense in cliffs, escarpments, and steep slopes. Further, the central highlands were prone to landslides. The landslides often occurred along the steep bouldery gorges produced by the numerous short, swift streams that flow to the sea.<sup>64</sup> In the mountainous terrain, vehicles, including tanks, were confined to a small number of roads.<sup>65</sup> The transport of heavy mortars and other equipment

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<sup>60</sup>Eisenhower, 28.

<sup>61</sup>Department of the Army, *Commander and Staff Officer Guide*. (Washington, DC, 2011), 5-6.

<sup>62</sup>Eisenhower, 6.

<sup>63</sup>Ibid.

<sup>64</sup>Headquarters CT 26, *FO#6: BIGOT*. (Operations Order, A. P. O. #1, U. S. Army, 1943), 14.

<sup>65</sup>Eisenhower, 6.



required pack animals, some of which were available in Sicily.<sup>66</sup> The Catania plain on the eastern coast of Sicily had a thick network of canals, drainage ditches and rivers that posed a formidable barrier to armored forces.<sup>67</sup> Throughout Sicily there were numerous streams, but the majority of them were dry during the summer.<sup>68</sup> In contrast to Sicily's many obstacles, it had almost no cover and concealment. The central uplands were bare and provided no cover for attacking forces. Sicily had no forests, and only a few scattered groves of trees. However, the olive and orange trees could provide dispersed vehicles cover from air.<sup>69</sup> Having considered the Sicilian terrain, now consider Sicily's weather.

The most important thing to understand about weather is how it affects specific types of military operations. During World War II moonlight was the best condition for night parachute landings because it allowed paratroopers and their equipment to be dropped on the correct location. However, during World War II, naval forces required complete darkness to approach the beach landing sites and achieve surprise. Darkness mitigated the risk of detection by Axis air forces and lookouts, and degraded the effectiveness of Axis air attack if the naval forces were detected. After taking the beach, landing forces required about two hours in darkness to set up their anti-aircraft defenses, which needed to be operational by dawn. Therefore there was an inherent tension between the optimal weather for airborne operations and for amphibious assault. The best compromise was the second quarter of the moon, so the early period of the night had moonlight for an airborne insertion, and after midnight there was complete darkness for naval

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<sup>66</sup>Ibid.

<sup>67</sup>Ibid., 28.

<sup>68</sup>Headquarters CT 26, *FO#6: BIGOT*, (Operations Order, A. P. O. #1, U. S. Army, 1943), 14.

<sup>69</sup>Eisenhower, 6; Headquarters CT 26, *FO#6: BIGOT*, (Operations Order, A. P. O. #1, U. S. Army, 1943), 14.

forces. These visibility considerations dictated a target date of 10 July 43.<sup>70</sup> Additionally, Sicily was hot and dry from June to August. These months often had temperatures of 100 degrees, but the humidity was low.<sup>71</sup> With this understanding Sicily in July 1943, including the Allied desired endstate for Operation Husky, the Allied and Axis forces, the population of Sicily, Sicily's infrastructure, and its terrain and weather, it is time to review and critique the plan for Operation Husky. The purpose of this critique, using the elements of operational art, is to draw out lessons in large scale combined arms maneuver applicable to today's army officers.

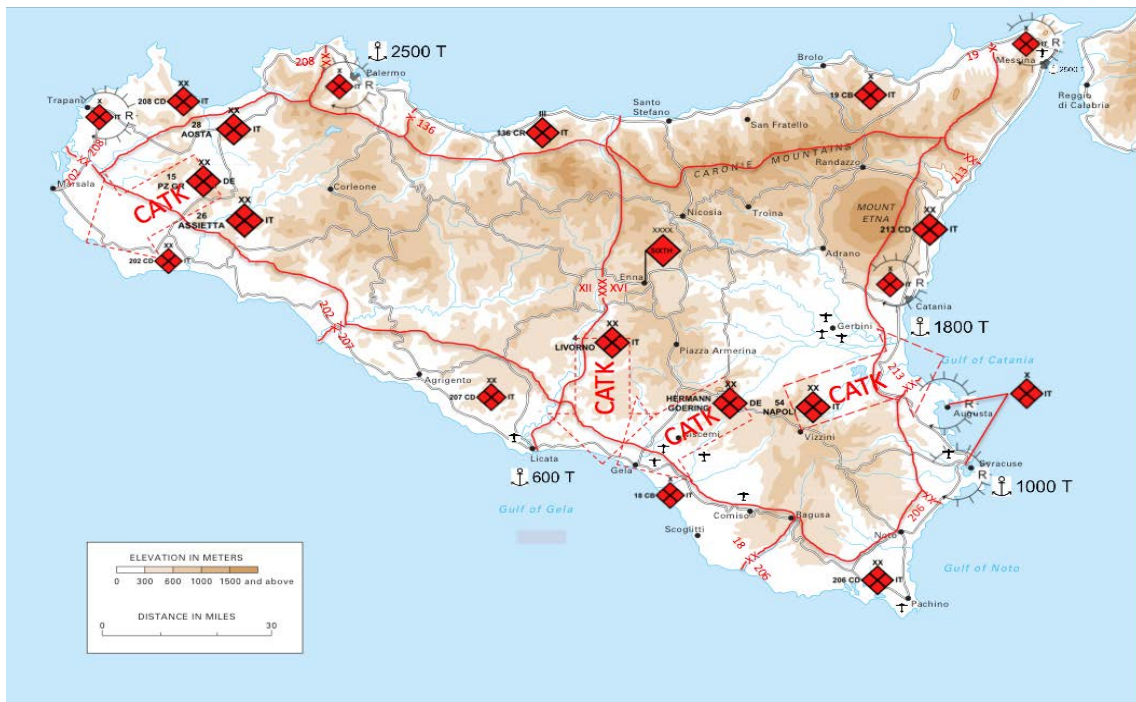


Figure 1: Sicily

*Source:* Base map courtesy of the U.S. Army Center of Military History, amended by author based on Garland, Smyth, and Blumenson, Map I

<sup>70</sup>Eisenhower, 7; Bradley, 105.

<sup>71</sup>Headquarters CT 26, *FO#6: BIGOT*, (Operations Order, A. P. O. #1, U. S. Army, 1943), 15.

## THE PLAN FOR OPERATION HUSKY

The plan for Operation Husky is an ideal tool to use to critique the Allies' operational art, because it communicates their thinking from July 1943 in writing. It contains their theory of victory, how they believed they could change the current operational environment into the desired endstate. This section explains the Allied plan for Operation Husky, described in four phases. However, these four phases are a modern interpretation of Operation Husky, to aid today's reader in understanding it. They were not used in 1943. After the plan is described, this section critiques it using today's elements of operational art, specifically, center of gravity, decisive points, lines of operation, operational reach, culmination, basing, and risk. The purpose of this critique is to provide vicarious experience from Operation Husky to today's army officers in employing the elements of operational art in large scale combined arms maneuver.

### The Allied Concept

The Allies' plan for Operation Husky can be described in four phases. The first phase was the Preliminary Phase, which included all the preparatory activities leading up to the day before the invasion, D-1.<sup>72</sup> The second phase was the Approach Phase, focused on the Allied naval approach to Sicily, which started on D-1 and lasted until the airborne drops on the day of the invasion, or D-day. The third phase was the Assault Phase, which started with the airborne assaults on Sicily, included the beach landings, and lasted until the assault forces secured their immediate objectives. The final phase was the conquest of Sicily.

The Preliminary Phase included a deception operation, extending the reach of Allied air forces, a preparatory air campaign to destroy the Axis air forces, and deep air attacks against Axis communications. The deception operation was conducted to lead the Axis to believe that the fictional British 12th Army would attack the Balkans and an American army under Patton would

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<sup>72</sup>“D” denotes the day of invasion, 10 July 1943.

invade Southern France. The deception plan called for an assault on Crete on 24 July, the Peloponnesus on 26 July, Sardinia and Corsica on 31 July, and southern France on 4 August.<sup>73</sup> Various Allied activities were conducted to reinforce the illusion of the deception plan, including aerial bombing attacks. The most famous of these activities was part of Operation Mincemeat. The Allies developed a complete plan that called for a feint to invade Sicily to support the real invasion of Sardinian and a feint to invade the Dodecanese Islands to support the real invasion of the Peloponnesus. To deceive the Axis, a deceased man dressed as a Royal Marine with the plan in a brief case handcuffed to his wrist was dumped off the coast of Spain.<sup>74</sup> In addition to the deception plan, Allied air forces conducted preparatory operations to ensure they could establish air superiority over the landing beaches during Operation Husky. To increase the range of Allied air attacks, the Allies captured the island of Pantelleria by using air attacks to force it to surrender. Then they repaired and garrisoned Pantelleria's airfields with Allied aircraft. Further, the Allies enlarged and expanded Malta's airfields to support over 600 aircraft. After Pantelleria was captured, Allied air forces focused their attacks on Axis airfields in Sicily and Sardinia in order to destroy the Axis air force. In addition to attacking the Axis air force, Allied air forces conducted deep attacks against Axis communications. These attacks focused on Naples, the Sardinian harbors of Olbia and Golfo Aranci, and on Messina's port and ferries.<sup>75</sup> The Allies' intent was to cut the Axis lines of communication to the island of Sicily. After their preparations were complete, the Allies conducted the Approach Phase.

Unlike the Preliminary Phase, during the Approach Phase Allied Air forces focused on the protection of naval convoys. The Allies committed over 2,000 aircraft to the operation to ensure the safe passage of over 3,200 ships and landing craft that participated in the assault.

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<sup>73</sup>Eisenhower, 16; Bradley, 120.

<sup>74</sup>Garland, Smyth, and Blumenson, 65.

<sup>75</sup>Eisenhower, 19.

Furthermore, the Allied air forces conducted a final bombing of Sicilian airfields and targets in the assault areas the night of 9-10 July.<sup>76</sup> In addition to air operations, Force H, with four British battleships and two aircraft carriers formed up southeast of Sicily and proceeded north to the Ionian Sea to protect the eastern flank of the assault and to reinforce the deception plan by threatening the western coast of Greece.<sup>77</sup> Force Z, two British battleships, was kept in reserve in the western Mediterranean. Moreover, both landing forces had escorts assigned. Seven British submarines approached the Sicilian shore and acted as beacons to guide the two task forces to their landing beaches.<sup>78</sup> To deceive the enemy, the assault convoy's approach routes conformed to routine shipping lanes. The assault convoys from east and west followed normal convoy routes close to the North African coastline and converged in the general area south of Malta to threaten Crete at the same time Force H threatened the coast of Greece. Then at night they approached Sicily in darkness.<sup>79</sup> As the two naval task forces closed on Sicily, the assault phase began with Allied airborne insertions.

The assault phase's concept was to seize the beach landing sites, then the ports the landing sites were next to, and then the nearest airfields. Eisenhower aptly described the concept for this phase as follows:

During the assault phase, Allied forces were to conduct a "...series of simultaneous seaborne assaults, assisted by airborne landings, to seize the ports of Syracuse and Licata and the airfields within striking distance of the Southeastern coastline between these two ports, in order to establish a firm base for operations against the Augusta, Catania, and Gerbini airfields."<sup>80</sup>

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<sup>76</sup>Ibid., 20.

<sup>77</sup>Ibid., 15.

<sup>78</sup>Ibid., 16.

<sup>79</sup>Ibid.

<sup>80</sup>Ibid., 12-13.

To begin the assault phase the Allies planned for British airborne forces to seize an area south of Syracuse including a bridge and points commanding the town. Specifically, the British had two landing zones, one just south of Syracuse to capture the canal bridge and railway and another in Syracuse's western suburbs to attack into the city.<sup>81</sup> The American airborne forces were directed to seize an area behind Gela to clear various obstacles for the Seventh Army advance on Ponte Olivo.<sup>82</sup> The American airborne force's drop zone was 4 miles inland and six miles east of Gela to seize high ground and road junctions controlling the exit from the beaches where the 1st Infantry Division was to land. The British and American airborne operations combined planned for over 350 aircraft and more than 130 gliders to transport roughly 5,000 Soldiers to the drop zones in Sicily over a water route of about 400 miles.<sup>83</sup> After the airborne operations the Allies planned to conduct the beach landings.

During the beach landings Allied air forces were tasked to protect the beaches and the naval task forces. The actual landings covered around 100 miles of coastline from Cap Murro Di Porco, south of Syracuse, around the southeastern tip of Sicily at Cap Passero, and westward to Licata.<sup>84</sup> The Allies planned for the Eighth Army to land in the eastern sector and then immediately capture the port of Syracuse and the airfield at Pachino. Follow on objectives for Eighth Army included the port and airfield at Augusta, the airfields in Catania and Gerbini, and a task to link up with Seventh Army.<sup>85</sup> Seventh Army was to land at Cap Scalambri, Scoglitti, Gela, and Licata and seize the airfields at Comiso, Biscari, Gela, and Ponte Olivo. Additionally they

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<sup>81</sup>Ibid., 20.

<sup>82</sup>Ibid., 13.

<sup>83</sup>Ibid., 20.

<sup>84</sup>Ibid., 13.

<sup>85</sup>Ibid.

were to capture the port and airfield at Licata.<sup>86</sup> During this phase the deception operation continued. Two cruisers and two destroyers were detached from Force H to conduct Operation Arsenal, a deception bombardment of Catania and Taormina.<sup>87</sup> After the Allies captured their initial objectives the next phase was the conquest of the island of Sicily.

During the conquest of Sicily phase, the purpose of airpower was to neutralize the Axis air force and provide security for the sea lines of communication and the assault beaches.<sup>88</sup> Eighth Army was the decisive operation and its planned mission was to advance north and capture Catania and the Gerbini airfields. Then it would continue its advance north along the eastern coastline and capture Messina, which would cut the Axis lines of communication to Italy. Seventh Army was a shaping operation, and its purpose was to protect Eighth Army's flank and the captured ports and airfields. Seventh Army was only to expand its territory in a limited way to accomplish these objectives. The planned limit of advance was a straight line from Acireale, just north of Catania on the east coast to Palma di Montechiaro, not far west of Licata on the south coast.<sup>89</sup> While the first three phases were planned in detail, the fourth phase, the land campaign, was not.<sup>90</sup> Next, consider how the plan for Operation Husky reflected the elements of operational art.

#### Critique Using the Elements of Operational Art

The elements of operational art provide a framework to critique if the plan for Operation Husky was well conceived. Seven elements, center of gravity, decisive points, lines of operation,

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<sup>86</sup>Eisenhower, 13; Headquarters CT 26, *BIGOT*, (Operations Order, A. P. O. #1, U. S. Army, 1943), 5; Bradley, 112.

<sup>87</sup>Eisenhower, 24.

<sup>88</sup>*Ibid.*, 12.

<sup>89</sup>*Ibid.*, 27.

<sup>90</sup>Garland, Smyth, and Blumenson, 89.

operational reach, culmination, basing, and risk, are evident in the plan. First, consider the Axis center of gravity.

There were two potential Axis centers of gravity. The first is the original two German divisions on Sicily, and the second is the city of Messina. Eisenhower assessed that the Italians were not effective Soldiers; however, he believed that the presence of the Germans would stiffen their will to fight.<sup>91</sup> Further, Eisenhower stated “My commanders and I were agreed from the beginning that if substantial German ground forces were to be placed in the threatened areas prior to the assault, our operation offered scant promise of success.”<sup>92</sup> However, Eisenhower also stated that Messina is the key to Sicily.<sup>93</sup> If the Allies seized Messina, they cut the Axis lines of communication between Sicily and Italy, and achieved the same effect as a complete encirclement of all Axis forces on Sicily. Further, while the Axis held Messina, they could reinforce Sicily with additional German units, which negated the advantage of destroying the original two German divisions. On the other hand, the only way to seize Sicily was to defeat the defending Axis forces, and arguably if the two German divisions were defeated the Italians would collapse. Seizing Messina would not directly defeat the German divisions, but it would compel them to fight to reestablish their lines of communication with Italy. In this light the Axis center of gravity was the two German divisions and Messina was a decisive point that they were committed to protecting. The Allied plan called for Eighth Army to be the decisive operation and to attack directly north and seize Messina. This appropriately focused Eighth Army on the center of gravity, since the German divisions would certainly defend Messina. However, Seventh Army was not focused on the German divisions. Better operational art would have called for Seventh Army to attack along a different axis of advance towards Messina immediately after securing its

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<sup>91</sup>Eisenhower, 9.

<sup>92</sup>Ibid.

<sup>93</sup>Ibid., 27.



initial objectives. Then two Allied armies would have been concentrated against the Axis center of gravity. Although the Allies did a poor job of focusing on the Axis center of gravity, they did an excellent job of identifying the decisive points on Sicily.

Decisive points were clearly laid out by the Allied plan. The first was seizing the beachheads, next, seizing airfields, then seizing critical ports, and the final was seizing Messina.<sup>94</sup> Eisenhower stated: “The first task ... was to get maximum forces and supplies ashore as quickly as possible at the points where air cover could be provided.”<sup>95</sup> Then Eisenhower specified that: “[T]he immediate objective of the assault forces must be the airfields both in the Southeast and in the West to provide the extension of air cover essential for the capture of the ports.”<sup>96</sup> The ports were critical to build up and supply sufficient forces to capture Sicily. General Alexander wrote, “It was obviously essential for us to have a port or ports through which to supply the troops fighting inland.”<sup>97</sup> In the southeast the airfield near Gela was one of the most developed, and Air Chief Marshal Tedder considered the airfield at Pachino critical too.<sup>98</sup> The air and naval commanders stressed that the airfields at Comiso, Ponte Olivo, and Biscari must be seized quickly to prevent losses to Allied shipping supporting the invasion.<sup>99</sup> The final decisive point was Messina, and Eisenhower simply stated, “Messina was the most important objective on the

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<sup>94</sup>FM 100-15, 12. World War II doctrine stressed the importance of seizing airfields as an initial objective to then gain air superiority. “Unless the commander already possesses sufficient air superiority to permit other operations, the initial objective must include the attainment of air superiority. This may also require operations to acquire bases from which effective air operations can be conducted.”

<sup>95</sup>Eisenhower, 6.

<sup>96</sup>Ibid.

<sup>97</sup>Harold Rupert Leofric George Alexander, *The Alexander Memoris: 1940-1945*, ed. John North, (New York: McGraw-Hill Book Company, Inc., 1962), 105.

<sup>98</sup>Eisenhower, 8.

<sup>99</sup>Ibid., 10.

island....”<sup>100</sup> It is surprising, since the Allies were so apt at identifying Sicily’s decisive points, that they did not construct excellent lines of operations.

Lines of operation are evident in the plan for Operation Husky. The British Eighth Army had a simple line of operation aimed at Messina that passed through decisive points, including the port of Syracuse. However, the American Seventh Army had multiple lines of operation that aimed at some decisive points, but which prevented them from focusing on the Axis center of gravity, the German divisions in Sicily. Therefore Operation Husky made poor use of lines of operation. In contrast, the Allies carefully calculated operational reach and culmination.

Operational reach and culmination are tightly linked, so both are considered simultaneously here. Operation Husky is a detailed plan to prevent Allied culmination by systematically seizing bases—ports and airfields—to extend the Allies’ operational reach. The first consideration was the operational reach of the Allied aircraft. Prior to the invasion, Allied fighters could only cover the beaches between Avola and Gela in the southeast and between Sciacca and Marinella in the west. However, there are no major ports in these areas.<sup>101</sup> The connection between the operational reach of allied air and ports for logistical sustainment was a key planning factor. General Alexander wrote “There were four good ports with the necessary capacity; Messina, Catania, Syracuse, and Palermo. Messina was heavily guarded by fixed defenses and beyond the range of our fighters. Catania was only just within fighter cover, and was also heavily defended and under the fighter umbrella of the Luftwaffe based on the Catania group of airfields, within close striking distance of the port. Syracuse and Palermo were both within our fighter cover and not so heavily defended.”<sup>102</sup> In addition to the operational reach of the Allied

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<sup>100</sup>Ibid., 5.

<sup>101</sup>Ibid., 5.

<sup>102</sup>Alexander, 105.

aircraft, the sustainment of ground forces to prevent culmination was a key aspect of Operation Husky.

To prevent culmination, the Allies ensured their ground forces landed with sufficient supplies. Regarding culmination, Eisenhower explained “The mounting, assembly, and supply of the assault forces was a gigantic undertaking which required the closest coordination between four separate theaters and taxed our shipping supply to the limit.”<sup>103</sup> In the Middle East the British 5th Infantry Division, 50th Infantry Division, and 213th Infantry Brigade were staged for Operation Husky with seven days of supply. In the United Kingdom the 1st Canadian Division was staged with 24 days of supply. In Tunisia and Malta the British 51st Division, 78th Division, and a Canadian army tank brigade were staged with 21 days of supply. In the United States the 45th Division was staged with 21 days of supply, and finally, in North Africa the 1st Infantry Division, 9th Division and 3rd Divisions were staged with seven days of supply.<sup>104</sup> But despite these initial supplies, it was clear the Allies would have to immediately establish bases.

These bases would have to be at ports, since Sicily is an island. Seventh Army would not have a major port early in the operation—the port of Licata had a capacity of 600 tons a day which was about half of the smallest major port. To prevent culmination arrangements were made for 2,500 American service troops to use the port of Syracuse, in Eighth Army’s area of operations.<sup>105</sup> Additionally, D.U.K.W.’s were used to unload over the beaches.<sup>106</sup> Detailed

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<sup>103</sup>Eisenhower, 13.

<sup>104</sup>Ibid.

<sup>105</sup>Ibid., 14.

<sup>106</sup>Garland, Smyth, and Blumenson, 104. A 2.5-ton amphibious truck capable of carrying 25 Soldiers plus equipment or 5,000lbs, or 12 loaded litters and traveling at 5.5 knots in water or 50mph on ground. It had six wheels; United States Army Transportation Museum. *dukw*. May 15, 2013. <http://www.transportation.army.mil/museum/transportation%20museum/dukw.htm> (accessed October 9, 2013). DUKW, pronounced “duck” is not an acronym. Rather, it was the General Motors designation meaning D for built in 1942, U for amphibious 2.5 ton truck, K for front wheel drive, and W for rear wheel drive.

planning for sustainment was conducted because of the bases that Operation Husky was launched and sustained from were widely separated and because the British and American Armies had completely different logistical systems.<sup>107</sup> The assault troops landed with an average of 14 days of supply, and the Eastern Base Section at Bizerte stockpiled 15 days reserve for 140,000 Soldiers to prevent culmination.<sup>108</sup> In addition to doing an excellent job of planning operational reach and basing, the Allies also carefully considered risk.

Risk pervades Eisenhower's planning for Operation Husky. Eisenhower took a number of actions that deliberately calculated risk in Operation Husky including revising the plan, conducting a deception operation, conducting rehearsals, and timing the attack due to weather. The plan for Operation Husky was continuously revised to balance risk. An early draft called for Seventh Army to conduct sequential amphibious landings to rapidly capture Palermo. However, Eisenhower revised the plan into its final form due to risk.

After long conference, all commanders agreed that the airfields of the Southeast must be secured in the first rush, and that all available strength in both task forces should be concentrated to achieve that objective. On May 3rd we stopped tinkering and completely recast our plan on the sound strategic principle of concentration of strength in the crucial area. I abandoned not only the Southwestern assault scheduled for D plus 2, but the assaults West of PALERMO on D plus 5 as well, and diverted the entire Western Task Force to the Southeastern assault. I deliberately assumed the maintenance and supply risk involved in the sacrifice of PALERMO as an immediate objective, because all of us were at last convinced that it was the lesser of two evils.<sup>109</sup>

During Operation Torch Eisenhower learned how difficult it was to defeat Axis troops in mountainous positions. With this experience in mind, Eisenhower calculated that if the Seventh and Eighth Armies were not within supporting distance, the defending Axis forces might be able to hold both Armies at their landing sites, and then concentrate for a counterattack against one

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<sup>107</sup>Eisenhower, 14.

<sup>108</sup>*Ibid.*, 18.

<sup>109</sup>Eisenhower, 10.

army. Because of this risk, he concentrated his forces to achieve mass in Operation Husky.<sup>110</sup> This concentration assumed a different kind of risk in sustainment because Eisenhower did not detail forces to seize desirable ports early in Operation Husky.<sup>111</sup> General Alexander agreed with Eisenhower and reflected in his memoirs that the Allies did not have a numerical superiority over the Axis during Operation Husky, so while it would have been better from a sustainment perspective to land Seventh Army on Palermo, the risk to the overall operation was mitigated by landing both the Seventh and Eighth Armies near Syracuse where they were mutually supporting.<sup>112</sup> General Alexander wrote “I made the decision to put the United States Seventh Army ashore on the open beaches on the left of the Eighth Army, which would land just south of Syracuse. Certainly the decision represented a risk, but it was a calculated risk.”<sup>113</sup> General Montgomery also favored concentrating Allied forces because he felt it was important not to underestimate the Axis. He pointed out “The Germans and also the Italians are fighting desperately now in Tunisia and will do so in Italy.”<sup>114</sup> Another way Eisenhower balanced risk was by conducting a deception operation.

When describing the deception operation, Eisenhower said “By such a ruse we might hope to retard the reinforcement of Sicily by German troops, reduce the intensity of air and naval attacks on our shipping until D-1, and keep the Taranto squadron of the Italian Fleet East of the

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<sup>110</sup>FM 100-15, 53. FM 100-15 stressed that offensive plans for large units must carefully consider the enemy’s capabilities. “They must not overlook, however, the capabilities of the enemy to execute strong countermeasures, including attacks by air and armored forces, and defense measures designed particularly to slow down, block, or completely stop the rapid advance of armored and motorized elements.”

<sup>111</sup>Eisenhower, 10.

<sup>112</sup>Alexander, 106.

<sup>113</sup>Ibid., 107.

<sup>114</sup>Garland, Smyth, and Blumenson, 52.

Straits of Messina.”<sup>115</sup> Clearly he hoped to mitigate the tactical risk to the force, as he also did with his rehearsal plan. Allied rehearsals prior to the invasion were a risk because of enemy aircraft and submarines. Despite this, the Allies conducted landing rehearsals but Eisenhower only allowed a reduced scale dry run. The dry run did not completely unload equipment and supplies and therefore did not prepare the Allies for “the critical phase of the landing when beaches become heaped with supplies, boats are disabled, and the Army supply system is threatened with breakdown.”<sup>116</sup> But this was deliberate to balance the risk of detection and attack by Axis air forces. Like rehearsals, weather conditions also affected risk. Weather mitigated risk differently for the navy and airborne forces. The navy needed darkness to approach Sicily, while airborne forces required moonlight for airplanes operating in radio silence to find the drop zone and for the airborne Soldiers to assemble. Eisenhower chose 10 July for the invasion because it had a period of darkness and moonlight. This compromised the risk between both airborne and naval forces.<sup>117</sup> The Allied plan for Operation Husky is not the only place where the Allied application of operational art can be examined. It can also be examined in the actual execution of Operation Husky. Few plans are executed exactly as intended, and the Allied decisions after the battle was joined with Axis forces also illuminate their understanding of operational art.

#### THE EXECUTION OF OPERATION HUSKY

This manual emphasizes the importance of modern means of combat. It stresses the fundamental doctrine that successful modern military operations demand *air* superiority.

—FM 100-15, *Army Service Regulations: Larger Units*, 1942

The previous section summarized the Allies’ plan for Operation Husky and then critiqued it using the current elements of operational art. This section will summarize Operation Husky’s

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<sup>115</sup>Eisenhower, 16.

<sup>116</sup>*Ibid.*, 18.

<sup>117</sup>*Ibid.*, 21.

38 day campaign. As the summary proceeds, critique according to various elements of operational art is interwoven. The section begins with a discussion of risk and operational reach with respect to the Allied reduction of the islands of Pantelleria and Lampedusa. Then phasing and tempo are considered in a discussion of the Allied airborne insertions. Next, the operational art elements of basing, decisive points, and lines of operation are highlighted during the Allied landings. After the landings, tempo and center of gravity are examined during the Allied breakout from the beaches. Then basing, operational reach, and culmination are discussed with respect to Seventh Army's seizure of Palermo. The section concludes by considering holistically how today's army officers can apply the lessons of Operation Husky. The execution of Operation Husky begins with the reduction of the islands of Pantelleria and Lampedusa.

On 11 June Axis Forces on the island of Pantelleria surrendered, after a massive bombing campaign, and on 12 June Axis Forces on Lampedusa surrendered.<sup>118</sup> These two islands allowed the Allies to extend the operational reach of their air power to Sicily. During the month long Allied air offensive that preceded the invasion, enemy air opposition was largely neutralized by losses and damage to the Sicilian airfields. Further, the Axis communication facilities for supplying Sicily were damaged.<sup>119</sup> The seizures of Pantelleria and Lampedusa prior to the invasion of Sicily illustrate the Allies astute use of two of the elements of operational art: risk and operational reach. The Allies extended the operational reach of their fighter air cover over the sea lines of communication near Sicily and the landing beaches on Sicily. This decreased the risk of the approach of Allied naval forces to Sicily and the risk of the beach landing.

Operation Husky began with an airborne insertion to support the beach landings. The airborne insertion was a minor disaster. During the simultaneous take off of the British and

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<sup>118</sup>Eisenhower, 18; Bradley, 115.

<sup>119</sup>Ibid., 20; Bradley, 114-5.

American forces, some American planes ended up following the British formation. By midnight winds were blowing at 40 miles per hour aloft, causing both the Americans and British to be late for their first checkpoint at Malta. Near Sicily enemy flak caused navigational difficulties, and numerous planes were unable to find their target. Only 12 of 134 British gliders landed in the correct drop zone, and many landed at sea. The 82nd Airborne Division was dispersed over 50 miles.<sup>120</sup> Eight British officers and 65 men reached the canal bridge near Syracuse, which they held until 1530 on D-Day, but then were forced to withdrawal. However, the British 5th Division retook it and captured Syracuse on D-Day without difficulty because the Axis forces did not destroy the canal bridge.<sup>121</sup> The battalions of the 82nd Airborne Division seized high ground near Vittoria, well east of Gela, captured the town of Marina di Ragusa and destroyed roadblocks on the highway to Ragusa.<sup>122</sup> The next American airborne operation, on the night of D+1, to drop additional forces near Gela was a worse disaster. Allied anti-aircraft gunners on ship and shore had sustained two days of Axis air attack so they engaged and destroyed 23 Allied aircraft and severely damaged the rest.<sup>123</sup> The second British landing, the night of D+3, to capture the Bridge over the Simeto River, which was the primary line of communication to the Catania plain to the north, also had trouble. Twenty-six of 129 aircraft had to return early because of intense flak off shore. The navy received warning of the airborne operation around noon, but could not distribute word to all the merchant ships by night. Eleven aircraft were lost to friendly fire. Airborne forces described Axis fire as inaccurate but “Allied Naval fire as very accurate and concentrated.”<sup>124</sup>

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<sup>120</sup>Ibid., 21.

<sup>121</sup>Ibid.

<sup>122</sup>Ibid.

<sup>123</sup>Ibid., 22; Bradley, 133.

<sup>124</sup>Ibid., 23.



The difficulty the Allies had with their airborne operations illustrates a failure to apply the element of phasing.

The purpose of the airborne insertions was to increase the tempo of the Allied breakout from the beach landing sites. The airborne forces did improve the Allies' tempo. The Seventh Army commander said airborne forces accelerated his advance by two days, while the Eighth Army commander said airborne forces accelerated his advance by at least seven days.<sup>125</sup> However, the Allies poor use of phasing reduced the effectiveness of the airborne operations. If the Allied plan had a specific phase for the airborne insertions, and it was understood by the invasion force, it would have mitigated the risk of fratricide and helped synchronize the airborne operation. For example, ships may have gone to navigational way points in advance to assist the airborne forces in their approach, much like the Allies used submarines to guide the naval forces to their landing beaches. Had more airborne forces, with better cohesion, reached their drop zones they would have made a more significant contribution to the Allies' tempo. Although the initial airborne operations were poorly executed, the beach landings were well executed.

Allied landings achieved both strategic and tactical surprise, partially due to the poor weather.<sup>126</sup> The Axis did little to oppose the landings; some shore batteries were not even manned. The weather was very difficult, but the Allies quickly pushed inland. The organization and operation of the beaches, to establish supply over the shore, was challenging, especially from D Day to the night of D+1, due to the poor weather and Axis air attacks.<sup>127</sup> From D-Day to 2359 hours on D+1, 15th Army Group landed 80,000 Soldiers, 7,000 vehicles, 300 tanks, and 900 guns. Ports were also quickly captured; Licata was opened to shipping on D-Day, Syracuse on

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<sup>125</sup>Ibid; Bradley, 127.

<sup>126</sup>Ibid., 24.

<sup>127</sup>Ibid., 25.

D+1 and Augusta on D+3.<sup>128</sup> During the assault the air force maintained constant air cover from Malta, Gozo, and Pantelleria and flew about 1200 fighter sorties. The Pachino and Gela airdromes were occupied on D-Day, Comiso on D+1, Ponte Olivo and Biscari on D+2. The fields were repaired and on D+3 the 244th Royal Air Force Wing was flown into Pachino. The Axis launched 89 air attacks into the American sector from D Day to D+3, and 26 were driven off before they reached their targets. The other 63 were engaged by fighters over their targets and were mostly ineffective.<sup>129</sup> The landing phase shows the successful application of three of the elements of operational art.

The Allies carefully applied the elements of basing, decisive points, and lines of operation during the initial landings. They knew that they had to establish lines of communication to provide logistical support to their forces. So they identified the decisive points—ports and airfields, and then developed lines of operations for each unit to capture these decisive points. The conceptual line of operation for every division was to first secure the beach landing site, second secure the nearby port, and third secure the closest airfields. These ports and airfields then became Allied bases. However, the Axis forces did not simply cede the Allies these bases.

During the first week the majority of the German forces in Sicily, the Hermann Goering and the 15th Panzer Grenadier Divisions, which included about 160 tanks, attacked Seventh Army. The first counterattack on 11 July penetrated to within 1,000 yards of the 1st Division beachhead at Gela.<sup>130</sup> General Bradley wrote that naval gunfire was vital to success and stated “Without it the 1st Division might have been thrown back into the sea.”<sup>131</sup> Despite the Axis efforts, by 12 July the 3rd Infantry Division had secured the important road junction at

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<sup>128</sup>Ibid., 25-26.

<sup>129</sup>Ibid., 26.

<sup>130</sup> Ibid, 27; Bradley, 131. Bradley writes 2,000 yards.

<sup>131</sup>Bradley, 128.

Canicatti.<sup>132</sup> The Germans launched three additional counter attacks, all of which failed, and then between 17 and 20 July they withdrew to oppose Eighth Army. This demonstrates a failure in the Allies use of tempo. Through constant, aggressive action, Seventh Army should have fixed the German forces and maintained the initiative. But although their counterattacks failed, the Axis still had the initiative and was able to reposition their most capable forces, the two German divisions, against Eighth Army, which had a direct avenue of approach to Messina. In addition to his poor use of tempo, General Alexander did not properly attack the Axis center of gravity.

On the 14th General Alexander gave Eighth Army a second axis of advance by assigning them the network of road communications from Leonforte to Enna in central Sicily that connect to Catania via the southern slopes of Mount Etna. He assigned Seventh Army the same road network westward and south via Caltanissetta to Canicatti. The army boundaries were projected from their junction at Enna due north to the coast near San Stefano. Eighth Army was still the main effort to capture Messina.<sup>133</sup> This boundary change is part of the reason Seventh Army made poor use of tempo. Divisions in Seventh Army had to pull back to the coast and then move west before they could resume the offensive, a delay that took several days.<sup>134</sup> While Montgomery's concern that Eighth Army was stuck on the Catanian Plains was legitimate, instead of changing the boundaries to allow Eighth Army to attack to the west of Mount Etna, Alexander could have simply ordered Seventh Army to conduct the attack.

General Alexander's 16 July objective was similar, and required Eighth Army to drive the enemy into the Messina peninsula by attacking on three axes: North along the coast from Catania, eastward via Leonforte to Fegalbuto to Adrano, and northeast via Nicosia to Tronina to Randazzo. Seventh Army was ordered to protect the rear of Eighth Army as it pivoted northeast

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<sup>132</sup>Eisenhower, 27.

<sup>133</sup>Ibid.

<sup>134</sup>Bradley, 136.

by securing the Villarosa-Enna-Caltanisseta area with a division and by seizing the road junctions at Petralia and south of Resuttano.<sup>135</sup> However, Seventh Army's advance was very rapid, and on the 17th General Alexander ordered Seventh Army to "Drive rapidly to the Northwest and North, capture Palermo, and split the enemy's force." Then the next day he ordered Seventh Army to clear the western part of Sicily after Seventh Army was established on a line of Campofelice-Petralia-Caterina-Caltanisseta-Agrigento.<sup>136</sup> So for over a week Seventh Army was focused on secondary objectives instead of the Axis center of gravity.

General Alexander's major mistake during Operation Husky is that he did not concentrate his forces on the enemy's center of gravity, the German divisions. Instead, he wasted time allowing Seventh Army to secure western Sicily. Edmund F. Ball, a staff officer in the American Seventh Army provides a possible explanation for this oversight when he explains "It seemed that during the planning stages of the Sicilian operation General Montgomery, who was just winding up his victorious Desert Campaign in Libya and Tunisia, had stated that his battle-hardened 8th Army would sweep across the island and capture Messina while the green United States troops got practical fighting experience in other less important areas of Sicily."<sup>137</sup> Whatever the cause, this was not an error General Alexander allowed to persist for long. "Yet, within ten days of the landings, the roles of the two Armies were largely reversed, with the Eight Army held up by the concentration, during the second week, of German strength in the Catania area while Seventh Army struck rapidly Northwest toward Palermo, largely against Italians, to cut the island in two."<sup>138</sup> However, the ten-day delay made Operation Husky significantly more costly. In this time

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<sup>135</sup>Ibid., 27-28; Bradley, 140.

<sup>136</sup>Ibid., 28.

<sup>137</sup>Edmund F. Ball, *Staff Officer: With the Fifth Army: Sicily, Salerno and Anzio* (New York: Exposition Press, 1958), 177.

<sup>138</sup>Eisenhower, 27.

the Germans were able to reinforce Sicily with additional forces, build a defense in depth, and set the conditions to retrograde to Italy in good order.

On 12 July General Montgomery asked General Alexander to change the Seventh—Eighth Army boundaries so that the Vizzini-Caltagirone Highway, which was the most significant north-south line of communication, would belong to Eighth Army. General Montgomery argued that he needed that line of communication to advance on Messina, and further recommended that Seventh Army guard his flank. General Alexander made the boundary change, but instead ordered Seventh Army to capture Palermo and then drive to Messina, focusing his forces on the center of gravity.<sup>139</sup> If Seventh Army had attacked immediately to seize Messina, instead of Palermo, it would have executed a turning movement. The Axis forces in western Sicily would have had to displace and counterattack to open their lines of communication to Messina, or eventually surrendered when their supply ran out. They would have lost the opportunity to withdrawal to Italy. World War II doctrine explains, “Objectives which will gain the initiative and force the enemy to regulate his movements on those of the attacker may be necessary initially. The selection of such objectives may force the enemy to leave any prepared and probably fortified localities that are favorable to the execution of his plans. Armies or groups of armies do not therefore of necessity move directly against the enemy’s main forces but may advance toward some locality containing the essentials of his national life and thus force the enemy to move to its defense, or abandon important territory or areas of military advantage to him.”<sup>140</sup> One argument for diverting Seventh Army to western Sicily was to secure more bases to prevent culmination—specifically, to capture Palermo.

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<sup>139</sup>Rupert Clarke, *With Alex at War: From the Irrawaddy to the Po* (Barnsley: Leo Cooper, 2000), 114-5.

<sup>140</sup>FM 100-15, 13.

By 20 July Eighth Army had established a bridgehead over the Dittaino River into the Catania Plains, but then a German defensive line along the Simeto River and the railway to Catenanuova stopped their advance. Two regiments of paratroopers from the 1st Fleiger Division, and the concentration of the Hermann Goering and 15th Panzer Grenadier Divisions reinforced the Germans after their disengagement from Seventh Army.<sup>141</sup> On 20 July General Alexander decided to have Seventh Army attack towards Messina since the Italians were weak and most all resistance was from German forces protecting Messina. He ordered Seventh Army to first take Palermo, but once it reached the coast, to send strong reconnaissance eastward on two axes, the coastal road, and the Petralia to Nicosia to Troina to Cesaro Road. He also told Seventh Army it could “back up these reconnaissance in strength if the situation permitted.”<sup>142</sup> On 22 July the U.S. 2nd Armored and 3rd Divisions met at Palermo and it surrendered without a fight. On 23 July General Alexander ordered Seventh Army to attack eastward no later than 1 August with maximum strength, and leave minimum forces to secure western Sicily. The Germans reinforced the north coast area with the 29th Motorized Division. Allied Naval Task Force 88 with two cruisers and six destroyers operated along the north coast of Sicily to support Seventh Army.<sup>143</sup> The port of Palermo was heavily damaged, including 44 vessels that were sunk in the channels and at the docks, so when Seventh Army captured it, it could only operate at 30 percent. After a month it was increased to 60 percent. Despite this, on 1 August the 9th Infantry Division disembarked at Palermo.<sup>144</sup> Further, Seventh Army now had two lines of communication, one from Gela to Licata to Porto Empedocle forward to Nicosia, the second from Palermo to Cefalu—which is where the railroad ended. On 3 August a beach was opened near San Stefano and

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<sup>141</sup>Eisenhower, 28.

<sup>142</sup>Ibid; Bradley, 145.

<sup>143</sup>Ibid., 29.

<sup>144</sup>Ibid; Bradley, 148.

supplies loaded at Palermo were discharged at this beach.<sup>145</sup> “Since road and rail transport was persistently hampered by enemy demolitions and mining, the movement of essential supplies by sea direct to the advancing armies materially hastened the end of the campaign.”<sup>146</sup> This highlights the Allied use of basing, operational reach, and culmination.

Establishing a base at Palermo extended the Allied operational reach because supplies disembarked there could travel directly along the flat, paved coastal highways to Seventh Army instead of over the mountainous interior of Sicily. Additionally, putting a fresh infantry division into the line, especially a cohesive one disembarked at a port instead of distributed over many small mountainous lines of communication, ensured that Seventh Army did not culminate. But the cost of this was tempo directed at the Axis center of gravity. It may have been better for Seventh Army to culminate, having focused all their effort on reaching Messina and defeating the German divisions guarding it, than efficiently accomplishing the secondary objective of clearing western Sicily. The effectiveness of the Axis defense of Catania against Eighth Army provides evidence for this argument.

Eighth Army captured Catania on 5 August, then Seventh Army captured Troina on 6 August, shrinking the front from 170 miles to about 45 miles, which focused air and ground attack on the Axis forces. During the Battle for Troina, the Germans counterattacked 24 times.<sup>147</sup> The north coast road was well fortified and hard to attack. The bridges were destroyed between Palermo and Messina, and there were booby traps and mines. To counter this Seventh Army used amphibious landings to envelope the enemy. The first operation on 8 August was conducted by 3rd Division and Naval Task Force 88 two miles east of San Agata to envelope the Germans near San Fratello who had stopped Seventh Army for four days. Similarly, on 11 August landings two

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<sup>145</sup>Ibid.

<sup>146</sup>Ibid., 30.

<sup>147</sup>Ibid.

miles east of Orlando enveloped the German defensive line from Cap Orlando to Naso.<sup>148</sup> Two additional landings were conducted on 16 August to cut off the German retreat, but were unsuccessful. On 17 August 3rd Division captured Messina.<sup>149</sup> The Axis lost 164,000 Soldiers killed, captured, or wounded, of which 32,100 were German. Further, the Germans lost 78 tanks and 287 artillery pieces.<sup>150</sup> Despite these significant losses, the Axis forces withdrew to Italy in good order. This successful Axis withdrawal is one of the most significant criticisms of Operation Husky.

### Lessons for Today's Officers

The execution of Operation Husky reveals a major flaw and a major strength of the Allied application of operational art. The flaw is planning while the strength was the cross-domain synergy the Allies achieved.

In contrast to their detailed planning for the initial invasion, the Allies did not plan the actual campaign for Sicily in advance.<sup>151</sup> Eisenhower wrote “No strategic plan can anticipate every possible contingency which may develop once the initial objectives have been secured”<sup>152</sup> and this seems to have been the guiding philosophy for the planning of Operation Husky. However, while enemy action or general friction of war can require a plan be changed, planning is still invaluable. For example, through detailed planning the Allies may have identified the Axis center of gravity as the German divisions, and the decisive point that was the key to defeating them as Messina. Then they could have developed a plan to focus the tempo of both the Seventh

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<sup>148</sup>Ibid.

<sup>149</sup>Ibid., 30-31; Bradley, 157-159.

<sup>150</sup>Ibid.

<sup>151</sup>Garland, Smyth, and Blumenson, 89; Bradley, 134. Bradley wrote “Preinvasion planning had provided only for the beach assault. From there the maneuver was to be directed from Alexander’s Army Group.”

<sup>152</sup>Eisenhower, 26-27.



and Eighth Armies at Messina. Phasing could have helped the Allies with achieving this focus and increased tempo. If 15th Army Group had planned a few phases in depth—the amphibious landing, driving to Messina, securing Messina, and then securing the rest of Sicily, General Alexander’s victory may have inflicted more casualties on the Axis while 15th Army Group suffered less. However the Allies did make excellent use of the air, land, and sea domains.

General Eisenhower achieved cross-domain synergy through his lines of operation. His land operations secured airdromes and ports, which not only provided logistic benefits, but also reduced the Axis’ air and sea lines of communication while increasing the Allies.<sup>153</sup> Air Chief Marshal Tedder expressed this cross domain synergy when he stated the “only sure way to weaken air opposition critically was to capture enemy airfields.”<sup>154</sup> General Bradley illustrates this principle with a short vignette he wrote. “The first ship to land at Comiso after its capture was a twin-engined German bomber. As the JU-88 lowered its landing gear and banked into the pattern, our AA fired and missed. Just as soon as he had taxied to a stop, the pilot jumped out shaking his fist at the gunners. Not until then did he learn the field had been captured. Next two ME’s swooped in but this time our gunners held their fire and two more pilots were captured.”<sup>155</sup> Capturing Axis airfields reduced risk to Allied Air and Naval Forces operating north of Sicily and allowed them conduct airborne and amphibious operations, which enveloped strong German defensive positions, opening Allied ground lines of communication.<sup>156</sup> Edmund F. Ball wrote

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<sup>153</sup>FM 100-15, 35. Stresses the importance of air superiority, and it is clear that Allied forces constantly sought to extend their air reach by using land forces to capture airdomes. “It is essential that the offensive forces have air superiority and that this air superiority is maintained throughout the operation.”

<sup>154</sup>Garland, Smyth, and Blumenson, 59.

<sup>155</sup>Bradley, 135.

<sup>156</sup>FM 100-15, 38. “Air, naval, and land force superiority may permit decisive results to be gained by an envelopment, by air-borne and sea-borne troops, of an enemy, one or both of whose flanks rests on navigable waters.”

“The Sicilian terrain was so rough and rugged that advances over it were extremely difficult. On 10 August some elements of the 1st Division on our left flank made an amphibious end run around some particularly rough country in the vicinity of San Stefano. This type of operation was used several times later in Italy, in the Pacific, and finally in Korea, but [Ball] believe[d] this incident was the first utilization of such an operation in actual combat. Several rather amusing incidents were reported of how confused the German troops became when they suddenly saw the enemy advancing upon them from their rear.”<sup>157</sup>

## CONCLUSION

The Allies practiced operational art during World War II, and it is evident during Operation Husky. As a result of Operation Husky the Allies captured Sicily, and accomplished most of their strategic objectives—opening sea lines of communication in the Mediterranean, weakening the Axis alliance between Italy and Germany, and diverting German resources from the Eastern Front. Operation Husky showcases thoughtful use of some of the elements of operational art, including lines of operation, decisive points, operational reach, basing, culmination, and risk. However, it also demonstrates the consequences of poorly employing the elements of center of gravity, tempo, and phasing. Carlo D’Este wrote “the Germans and their reluctant Italian ally succeeded in turning what ought to have been a great triumph into a bitter victory.”<sup>158</sup> The reason D’Este argues Operation Husky was a bitter victory is because the Allies lost some 20,000 Soldiers, the Germans retrograded in good order and fortified Italy, which proved very difficult for the Allies to capture.<sup>159</sup> Had the Allies focused both the Seventh and Eighth Armies on the Axis center of gravity, increased their tempo, and used phases, especially a

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<sup>157</sup>Ball, 178.

<sup>158</sup>D’Este, Carlo, *Bitter Victory: The Battle for Sicily, 1943* (New York: E. P. Dutton, 1988), 21.

<sup>159</sup>Eisenhower, Dwight, *Commander in Chief’s Dispatch, Sicilian Campaign, 1943* (Allied Force Headquarters, 1943), 31.

phase for the conquest of Sicily, planned in detail, Operation Husky could have been a decisive victory. The reason for the poor use of these elements of operational art was the poor planning that proceeded Operation Husky.

### Recommendations

First, a complete plan must be developed prior to initiating large-scale combined arms maneuver operations. This complete plan must include all phases of the operation. The Allies planned the approach, beach landing, and even the military government of Sicily in detail. However, they did not plan the actual land campaign, the conquest of Sicily, prior to the landing. This reduced their tempo and prevented them from concentrating on the Axis center of gravity, because they were busy building their plan while fighting, instead of adjusting an already well conceived plan as required by changing circumstances.

Second, large-scale combined arms maneuver operations require a plan to plan and resourcing of the planning. Generals Eisenhower and Alexander were focused on the fight in Tunisia, which did not end until 13 May 1943. But even after its end they both had considerable occupation duties. Further, although the land campaign ended, the air force and navy continued operations. The air force in particular was conducting continuous major combat operations until the start of Operation Husky. Additionally, the various headquarters involved were widely dispersed. A detailed plan to plan, resourced by detailing capable officers from every division and higher headquarters involved and co-locating them, would have improved Operation Husky because the planners would have had a shared understanding of the elements of operational art, including center of gravity and phasing.

Third, planners should integrate all domains in their application of the elements of operational art. Operation Husky highlights the skillful use of cross-domain synergy to extend operational reach, prevent culmination, and increase tempo.

Today's United States Army officers have robust experience in wide area security. However, in the future they may be required to plan large scale, combined arms maneuver operations involving multiple corps and divisions. To do so successfully, they will have to skillfully employ the elements of operational art. Operation Husky is a rich depository of vicarious experience in large scale combined arms maneuver for today's army officers.

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